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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,037	12/22/2005	Kiyotaka Inokami	2224-0251PUS1	6325

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EXAMINER	
CHENG, KAREN	
ART UNIT	**PAPER NUMBER**
1626	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/04/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/04/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/562,037	INOKAMI, KIYOTAKA	
	Examiner	Art Unit	
	Karen Cheng	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-11 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 12/22/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-11 are currently pending in the instant application.

Priority

The application is a 371 of International Application No. PCT/JP03/08014, filed on 06/25/2003.

Information Disclosure Statement

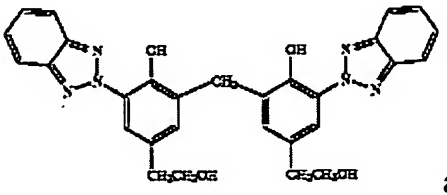
Applicant's Information Disclosure Statement filed on 12/22/05 has been considered. Please refer to Applicant's copies of the 1449 submitted herewith.

Claim Rejections - 35 USC § 112

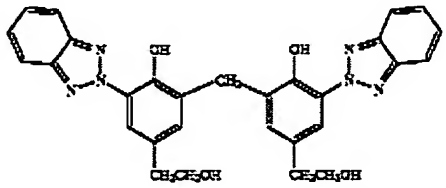
The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making an aqueous emulsion of a resin with



as (A) a polyol component having an ultraviolet-absorbing group, does not reasonably provide enablement for any polyol component having an ultraviolet-absorbing group. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

practice the invention commensurate in scope with these claims. Applicants have failed to provide enablement for production of an aqueous emulsion of an ultraviolet-absorbing resin with a polyol component other than  . They have provided no working examples or guidance towards production of an aqueous emulsion of an ultraviolet-absorbing resin besides with the compound described above.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants are claiming "(II) an aqueous emulsion of other resin" but it is not clear which other resin is being referred to as several aqueous emulsions are described throughout the claims and specification.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 9 recited "no less than 10% by weight" but it is unclear what the weight percent is based on. For example, is the weight percent based on the weight of the resin itself or another component of the resin?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Katsuhiko *et al* (see Japanese Pub No. 2002-187344). Katsuhiko *et al* disclose a ultraviolet absorption resin that can form an emulsion in water (see claim 1 and paragraph 5) and a composition containing said emulsion (see paragraphs 13-14).

Applicants' instant elected invention in claims 1-11 teach an aqueous emulsion of an ultraviolet-absorbing resin and aqueous resin emulsion composition. Applicant is reminded that "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Also see M.P.E.P. 2113.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Inokami *et al* (see US Pub No. 2003/0144455).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Inokami *et al* teach an aqueous emulsion of an ultraviolet-absorbing resin (see paragraph 34-paragraph 43) and an aqueous resin emulsion composition (see paragraph 44-47). This prior art embraces the compounds and compositions of claims 1-11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

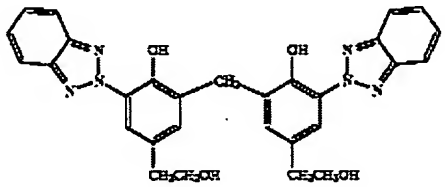
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-11 rejected under 35 U.S.C. 103(a) as being obvious over Inokami *et al* (see US Pub. No. 2003/0144455) in view of Mori *et al* (see US Patent No. 5,922,882).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

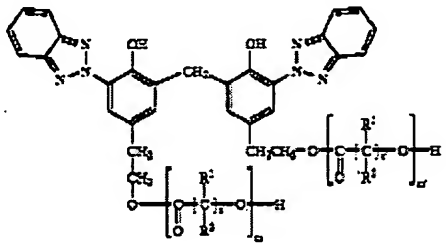
that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Applicants' instant elected invention in claims 1-11 teach an aqueous emulsion of an ultraviolet-absorbing resin obtainable by urethanizing (A) a polyol component having an ultraviolet-absorbing group, (B) a polyol, if necessary, (C) an alkyl or aryl dialkanolamine compound, and (D) an organic polyisocyanate in (E) an organic solvent, diluting the reaction mixture with (F) an organic solvent to give a resin solution, neutralizing said resin solution with (G) a neutralizing agent and dispersing the resultant in water wherein component (A) is 

Determination of the scope and content of the prior art (MPEP §2141.01)

Inokami *et al* teach an aqueous emulsion of an ultraviolet-absorbing resin obtained by reacting a polyester polyol with an ultraviolet-absorbing group (A), a compound with an ionic and/or nonionic surface active group, which can be an aryl or alkyl dialkanol amine, an organic polyisocyanate and, if necessary, a polyol, in the presence of an organic solvent (see paragraph 34 and 38). The polyol with an ultraviolet-absorbing group (A) is contained in an amount of 10% by weight of more (see paragraph 41), the aqueous ultraviolet-absorbing resin emulsion is obtained by neutralizing an organic solvent with a neutralizing agent and then dispersing the resultant in water (see paragraph 42). Further, the organic solvent can be removed to provide the aqueous ultraviolet-absorbing resin emulsion (see paragraph 43). An

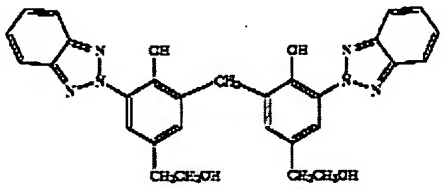
aqueous resin emulsion composition comprising the ultraviolet-absorbing resin and another resin are described (see paragraphs 44-47). As the polyol with an ultraviolet-



[0036] (R^1 and R^2 each represent a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, n and n' each are an integer of 4 to 5, m and m' each are an integer of 1 to 20, n R^1, n R^2, n' R^1 and n' R^2 each may be the same or different, and m and m' structural units may be the same or different)

absorbing group (A), Inokami *et al* use . Inokami *et al* also describe that ultraviolet absorbers conventionally known include benzotriazoles, such as hydroxyphenylbenzotriazole compounds are added to aqueous resin emulsions, but result in disadvantages making it difficult to impart a long-term stable light resistance to the resin (see paragraph 9).

Mori *et al* teach bisbenzotriazolylphenol compounds to be useful as UV



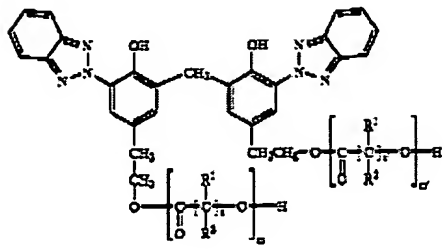
absorbers, specifically

2,2'-Methylenebis[6-(2H-benzotriazole-2-yl)-4-(2-hydroxyethyl)phenol]

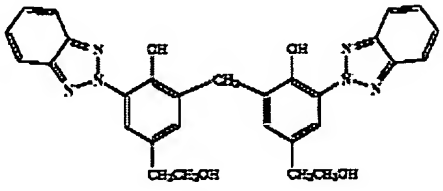
(see column 3, lines 60-61) with high UV absorptivity, low vapor pressure and high heat stability that does not transpire even under high temperatures while maintaining UV absorptivity (column 3, lines 5-15).

Ascertainment of the different between the prior art and the claims (MPEP §2141.02)

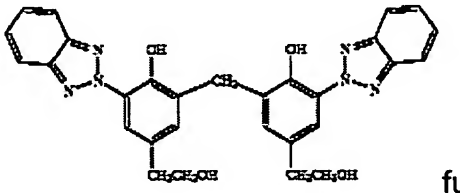
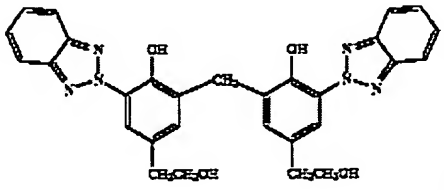
The difference between the prior art of Inokamie *et al* in view of Mori *et al* and the instantly claimed compositions is that Inokamie *et al* inventions contain



[0036] (R^1 and R^2 each represent a hydrogen atom or an alkyl group having 1 to 10 carbon atoms, n and n' each are an integer of 4 to 6, m and m' each are an integer of 1 to 20, n R^1, n R^2, n' R^1 and n' R^2 each may be the same or different, and m and m' structural units may be the same or different)

as the polyol with an ultraviolet-absorbing group rather than  as claimed in the instant invention.

Finding of prima facie obviousness- rational and motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skills in the art at the time the invention was made to attempt the process taught by Inokamie *et al* in view of Mori *et al* because Mori *et al* teach that  functions well with a low vapor pressure, high decomposition temperature and can be used to form weather resistant polycondensation polymer with excellent UV absorptivity, all limitations of conventional ultraviolet absorbers as taught by Inokamie *et al*. Inokamie *et al* show  as a precursor to the polyester polyol used in their

instantly claimed invention. The motivation of use the actual compound as a UV absorber rather than a precursor to other UV absorbers comes from the teachings of Mori *et al* which show that this compound has good UV absorptivity, low vapor pressure and high heat stability. In the absence of unexpected results, one skilled in the art would expect that the instant claims which are analogous to the compositions of Inokamie *et al* in view of Mori *et al*, is prima facie. The motivation to make the claimed compounds and compositions derives from the expectation that said compounds and compositions would still have the same desire properties and similar utilities. The explicit teaching of Inokamie *et al* in view of Mori *et al* together with the enabled examples would have motivated one skilled in the art to modify the known compounds and compositions with such generic teaching with the expectation that they would all have use as an aqueous ultraviolet-absorbing resin emulsion taught by Inokamie *et al* in view of Mori *et al*.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Cheng whose telephone number is 571-272-6233. The examiner can normally be reached on M-F, 9AM to 5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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